



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/686,897

10/15/2003

Christopher A. Rygaard

18511-010001

7543

26181 7590 06/12/2008

FISH & RICHARDSON P.C.

PO BOX 1022

MINNEAPOLIS, MN 55440-1022

EXAMINER

KANG, INSUN

ART UNIT

PAPER NUMBER

2193

MAIL DATE

DELIVERY MODE

06/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/686,897	Applicant(s) RYGAARD, CHRISTOPHER A.	
	Examiner INSUN KANG	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the RCE amendment filed on 6/2/2008.
2. As per applicant's request, claims 1, 10, 19, 25, and 34 have been amended. Claims 1-42 are pending in the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ad Astra ("Jumping Beans," Ad Astra Engineering, 12/3/1998, pages 1-44) hereafter "Astra" in view of Zhou et al. ("Adaptation and Specialization for High performance Mobile Agents," USENIX, 1999) hereafter Zhou.

Per claim 25:

Astra discloses:

-management and security console (i.e. "Jumping Beans' central management console," abstract, page 1, paragraph 3; Jumping Beans' security features, under security section in page 5); two or more host computers connected to the console by a computer network, wherein each host computer executes a jumping application (i.e. "Jumping Beans...which can move from host to host during execution," page 1, first paragraph; page 8, Figure 1.).

Astra discloses mobile code easily integrating with the hosts environments (i.e. page 5, Integration into existing environments section). Astra does not explicitly teach that the console includes a morphing module that alters a jumping application. However, Zhou teaches such a system having a morphing module was known in the pertinent art, at the time applicant's invention was made, to “submit agents in forms suitable for various platforms (i.e. page 11, lines 1-3).” Zhou further teaches that morphing can be “triggered at any point during agent execution (page 7, left col., third par.) Therefore, in Zhou, it is possible to initiate the morphing process before, in transit, or after a jump whichever is preferred. When the morphing process is performed in transit, a faster execution can be achieved. It would have been obvious for one having ordinary skill in the art to modify Astra’s disclosed system to incorporate the teachings of Zhou. The modification would be obvious because one having ordinary skill in the art would be motivated to change “the form of a mobile agent to adapt to the specific platform on which it is currently running (page 6, section 3.1 Agent Morphing).”

Zhou further teaches that morphing can be “triggered at any point during agent execution (page 7, left col., third par.) Therefore, in Zhou, it is possible to initiate the morphing process before, in transit, or after a jump whichever is preferred. When the morphing process is performed in transit, a faster execution can be achieved. Accordingly, it would have been obvious for one having ordinary skill in the art to modify Zhou’s disclosed system to perform the morphing process as the jumping application jumps between hosts, wherein the morphing module receives the jumping application from a first host and alters the jumping application before sending the jumping application to a next host, so that a faster execution of the morphed agent can be achieved.

Zhou further discloses a database that contains one or more behavior packages for the jumping application, wherein each behavior package alters the behavior of the jumping application for a particular host (i.e. “trusted repository to which providers submit agents in forms suitable for various platforms,” page 11, lines 1-3)

Astra in view of Zhou further discloses wherein the morphing module includes instructions that determine the next host to which the jumping application is being dispatched and instructions that alter the behavior of the jumping application for the next host using a first behavior package associated with the next host (i.e. Itinerary section in page 10 which specifying the dispatch path which a mobile application will follow in order and the agencies which the mobile application will visit).

Per claim 26:

Astra further discloses:

- the console instructions that determine the next host further comprises instructions that identify the next host of the jumping application based on an itinerary of the jumping application (i.e. Itinerary section in page 10 which specifying the dispatch path which a mobile application will follow in order and the agencies which the mobile application will visit).

Per claim 27:

Astra further discloses:

- the console instructions that alter the behavior of the jumping application further comprise instructions that gather information about each host of the jumping application system in order to determine the capabilities of each host (i.e. see Remote data gathering section, page 4).

Per claim 28:

Zhou further discloses:

- the console instructions that gather information further comprises instructions that store one or more particular behavior package associated with each host of the jumping application system wherein each behavior package adjusts one of a state and a behavior of a jumping application using the capabilities of the particular host (i.e. “the form of a mobile agent to adapt to the specific platform on which it is currently running,” page 6, section 3.1 Agent Morphing).

Per claim 29:

Zhou further discloses:

- the console instructions that alter the behavior further comprises instructions that identify a first behavior package associated with the next host for the jumping application and instructions that modify one of the state and the behavior of the jumping application using the identified behavior package (“the form of a mobile agent to adapt to the specific platform on which it is currently running,” page 6, section 3.1 Agent Morphing).

Art Unit: 2193

Per claim 30:

Astra further discloses:

- instructions that forward the jumping application with the altered behavior onto the next host (i.e. see Store-and Forward section in page 6).

Per claims 31 and 32:

Astra and Zhou do not explicitly disclose one or more groups and each group contains one or more behavior packages associated with a set of capabilities of a host computer and the host computer is assigned to a group based on the capabilities of the host computer. However, it would have been obvious for one having ordinary skill in the art to modify Astra and Zhou's disclosed system to group hosts based on their similar characteristics and capabilities. The modification would be obvious because one having ordinary skill in the art would be motivated to group hosts with the similar capabilities for efficient database transaction.

Per claim 33:

Zhou further discloses:

- a plurality of behavior packages associated with each jumping application wherein each behavior package for the jumping application is associated with a particular set of capabilities of a host computer(i.e. "trusted repository to which providers submit agents in forms suitable for various platforms," page 11, lines 1-3)

Per claim 19:

Astra discloses:

Art Unit: 2193

- -receiving at a morphing console a jumping application dispatched from a first host during a jump between hosts (i.e. see Remote data gathering section, page 4).
- determining a next host to which a jumping application is being dispatched (i.e. Itinerary section in page 10 which specifying the dispatch path which a mobile application will follow in order and the agencies which the mobile application will visit).

Astra discloses mobile code easily integrating with the hosts environments (i.e. page 5, Integration into existing environments section). Astra does not explicitly teach altering the behavior of the jumping application for the next host based on a behavior package associated with the next host. However, Zhou teaches such a system having a morphing module was known in the pertinent art, at the time applicant's invention was made, to “submit agents in forms suitable for various platforms (i.e. page 11, lines 1-3).” It would have been obvious for one having ordinary skill in the art to modify Astra’s disclosed system to incorporate the teachings of Zhou. The modification would be obvious because one having ordinary skill in the art would be motivated to change “the form of a mobile agent to adapt to the specific platform on which it is currently running (page 6, section 3.1 Agent Morphing)” as suggested by Zhou.

Astra further disclose dispatching the jumping application to the next host (i.e. Itinerary section in page 10 which specifying the dispatch path which a mobile application will follow in order and the agencies which the mobile application will visit).

Per claims 20-24, they are the method versions of claims 26-33, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 26-33 above.

Per claims 1-9, they are the console versions of claims 25-33, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 25-33 above.

Per claims 10-18, they are other console versions of claims 25-33, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 25-33 above.

Per claims 34-42, they are the server computer versions of claims 25-33, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 25-33 above.

Response to Arguments

5. Applicant's arguments filed on 6/2/2008 have been fully considered but they are not persuasive.

The applicant states that: in Zhou, all morphing occurs either on a host prior to migration or on a host after arrival. Zhou does not disclose a morphing console that alters a jumping application that is jumping between two or more hosts connected to the morphing console where the jumping application received from a first host, altered, and sent to a next host. Zhou does not disclose a morphing console that alters the jumping application as the application jumps between hosts, not before or after a jump. Zhou does not disclose morphing a jumping application while jumping between hosts (remark, 11).

In response, as the applicant states in page 10-11, in Zhou, the morphing can be performed before or after a jump. Zhou further states that morphing can be "triggered at any point during agent execution (page 7, left col., third par.)." Therefore, in Zhou, it is possible to

Art Unit: 2193

initiate the morphing process before, in transit, or after a jump. Zhou further discloses that the agent system can morph agents not the agent execution sites/hosts (page 7 left col. third paragraph; page 10, right col., last paragraph). Therefore, the applicant's statement above is not persuasive.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to INSUN KANG whose telephone number is (571)272-3724. The examiner can normally be reached on M-R 7:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock, Jr. can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Insun Kang/
Examiner, Art Unit 2193